

**What is claimed is:**

1. An interconnection for use with electrical components comprising:  
a first surface;  
a second surface;  
5 a plurality of nanostructures disposed on at least one of said first surface and said second surface; and  
means for attaching said first surface and said second surface in a way such that said nanostructures form at least a first conductive connection between said first surface and said second surface.
- 10 2. The interconnection of claim 1 wherein said conductive connection comprises a thermal connection.
3. The interconnection of claim 1 wherein said conducting connection comprises an electrical connection.
4. The interconnection of claim 1 wherein said plurality of  
15 nanostructures comprises:  
a first plurality of nanostructures disposed on at least a first area of said first surface; and  
a second plurality of nanostructures disposed in at least a first area of said second surface,  
20 wherein said first plurality of nanostructures and said second plurality of nanostructures are adapted to transfer thermal or electrical energy from said first plurality of nanostructures to said second plurality of nanostructures.
5. The interconnection of claim 1 wherein said first surface comprises a plurality of nanostructures adapted to adhere to said second surface via  
25 attractive forces between the molecules of at least a portion of said nanostructures in said plurality of nanostructures and said second surface.
6. The interconnection of claim 5 wherein said attractive forces comprise attractive intermolecular forces

7. The interconnection of claim 6 wherein said intermolecular forces comprise Van Der Waals forces.

8. The interconnection of claim 6 wherein said intermolecular forces comprise dipole-dipole forces.

- 5           9. An interconnection comprising:  
            a first surface;  
            a second surface;  
            a first plurality of conductive nanostructures disposed on said first surface;  
10           a second plurality of conductive nanostructures disposed on said second surface,  
            wherein said first plurality of nanostructures and said second plurality of nanostructures are adapted to transfer thermal or electrical energy from said first plurality of nanostructures to said second plurality of nanostructures.
- 15           10. A method for transferring thermal or electrical energy across an interconnection, said method comprising:  
            contacting a first plurality of conductive nanostructures with a second plurality of conductive nanostructures,  
            wherein at least a portion of said nanostructures in said first plurality  
20           and a portion of said nanostructures in said second plurality comprise a conductive material.

11. The method of claim 10 wherein said conductive material is a thermally conductive material.

- 25           12. The method of claim 10 wherein said conductive material is an electrically conductive material.

13. A method for transferring thermal or electrical energy across an interconnection, said method comprising:

            bringing a plurality of nanostructures on a first surface into contact with a second surface; and

causing at least a portion of the nanostructures in said plurality of nanostructures to adhere to said second surface.

14. The method of claim 13 wherein said step of causing comprises contacting said plurality of nanostructures with said second surface in a way  
5 such that the molecules of said at least a portion of the nanostructures are attracted to the molecules of said at least a second surface.